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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
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EXAMINER

BHANDARI, PUNEET

ART UNIT PAPER NUMBER

2666

DATE MAILED: 03/08/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

10/036,595

Applicant(s)

RASHID ET AL.

Examiner

Puneet Bhandari

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 12/21/2001.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 39-74 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☒ Claim(s) 54-58 is/are allowed.
- 6) ☒ Claim(s) 39-41, 51, 52, 59, 60 and 68-74 is/are rejected.
- 7) ☒ Claim(s) 42-50, 53 and 61-67 is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
- ☐ Certified copies of the priority documents have been received.
 - ☐ Certified copies of the priority documents have been received in Application No. _____.
 - ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☒ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date 03/10/03.
- 4) ☐ Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____.
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: _____.

Claim Rejections - 35 USC § 102

1. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

2. Claim **39-41, 51-52, 59-60 & 68-74** are rejected under 35 U.S.C. 102(e) as being anticipated by Dooley (US2002/0163914).

Regarding claim **39**, a method comprising the steps of:

- (a) Recording traffic volume of packet data for plurality of priority levels is anticipated by *“allocating memory space to each flow”* disclosed in paragraph 52, lines 56-63 as well as *“each flow has a defined class of service”* disclosed in paragraph 36, lines 1-2;
- (b) Calculating a weighted average bandwidth for each priority level in said plurality of priority levels is anticipated by *“computing moving average of number of stored cells assigned to each flow queue”* disclosed in paragraph 52, lines 5-7; and
- (c) Determining whether to reject packet data having a first priority level in said plurality of priority levels is anticipated by *“discards the incoming user data cell”* disclosed in paragraph 52, lines 7-18;

Regarding claim **40**, the method of claim 39, wherein said step includes the steps of:

(1) Determining whether an amount of packet data exceeds a first threshold is anticipated by *"WRED_LOW"* disclosed in paragraph 52, lines 3-10.

(2) Determining whether more than one weighted average bandwidths calculated in said step (b) exceeds a first predetermined value is anticipated by *"moving average is between WRED_LOW and WRED high"* disclosed in column 11, lines 8-15.

Regarding claim 41, the method of claim 40, wherein said first predetermined value is 0 is anticipated by *"minimum rates"* disclosed in paragraph 36, lines 1-3.

Regarding claim 52, the method of claim 51 wherein said traffic volume recorded in said step (a) for said priority level is a sum of traffic volume recorded in a plurality of time window is anticipated by *"computing moving average of number of stored cells assigned to each flow queue"* disclosed in paragraph 52, lines 5-7

Regarding claim 59, an apparatus is anticipated by *"network switch"* disclosed in paragraph 029, lines 1-3; comprising:

A set of input ports to receive data packets is anticipated by *input port* disclosed in paragraph 029, line 4

A set of sink port in communication with said set of input ports to forward said data packets is anticipated by *"output switch port"* disclosed in paragraph 029, line 4; wherein a first sink port in said set of sink ports is adapted to perform a method comprising the steps of

(a) Recording traffic volume of packet data for plurality of priority levels is anticipated by *"allocating memory space to each flow"* disclosed in paragraph 52, lines 56-63 as well as *"each flow has a defined class of service"* disclosed in paragraph 36, lines 1-2;

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(b) Calculating a weighted average bandwidth for each priority level in said plurality of priority levels is anticipated by *“computing moving average of number of stored cells assigned to each flow queue”* disclosed in paragraph 52, lines 5-7; and

(c) Determining whether to reject packet data having a first priority level in said plurality of priority levels is anticipated by *“discards the incoming user data cell”* disclosed in paragraph 52, lines 7-18.

Regarding claim 60, the apparatus of claim 59, wherein said set © includes the steps of:

(1) Determining whether an amount of packet data exceeds a first threshold *“WRED_LOW”* disclosed in paragraph 52, lines 3-10.

(2) Determining whether more than one weighted average bandwidths calculated in said step (b) exceeds a first predetermined value is anticipated by *“moving average is between WRED_LOW and WRED high”* disclosed in column 11, lines 8-15.

Regarding claim 68, apparatus of claim 59 wherein said step (b) includes the steps of:

(1) Dividing a traffic volume recorded in said step (a) for priority level in said plurality of priority levels by a priority weighting value for said priority level is anticipated by *“assigning discard weight to each range”* disclosed in paragraph 53, lines 1-7.

Regarding claim 69, the method of claim 68 wherein said traffic volume recorded in said step (a) for said priority level is a sum of traffic volume recorded in a plurality of time window is anticipated by *“computing moving average of number of stored cells assigned to each flow queue”* disclosed in paragraph 52, lines 5-7.

Regarding claim **70**, apparatus of claim 59 wherein each sink port in said set of sink port is adapted to perform a method comprising is anticipated by *"traffic manager for a network switch port"* disclosed in paragraph 76, lines 1-4; said steps of:

- (j) Recording traffic volume of packet data for plurality of priority levels is anticipated by *"allocating memory space to each flow"* disclosed in paragraph 52, lines 56-63 as well as *"each flow has a defined class of service"* disclosed in paragraph 36, lines 1-2;
- (k) Calculating a weighted average bandwidth for each priority level in said plurality of priority levels is anticipated by *"computing moving average of number of stored cells assigned to each flow queue"* disclosed in paragraph 52, lines 5-7;
- (l) Determining whether to reject packet data having a first priority level in said plurality of priority levels is anticipated by *"discards the incoming user data cell"* disclosed in paragraph 52, lines 7-18.

Regarding claim **71**, apparatus of claim 59 further including a multi-sink port coupled to said set of input ports is anticipated by *"input port is forwarded to the output port"* disclosed in paragraph 29, lines 1-5, wherein said multi-sink port is adapted to perform a method comprising said steps of:

- (m) Recording traffic volume of packet data for plurality of priority levels is anticipated by *"allocating memory space to each flow"* disclosed in paragraph 52, lines 56-63 as well as *"each flow has a defined class of service"* disclosed in paragraph 36, lines 1-2;
- (n) Calculating a weighted average bandwidth for each priority level in said plurality of priority levels is anticipated by *"computing moving average of number of stored cells assigned to each flow queue"* disclosed in paragraph 52, lines 5-7; and

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(o) Determining whether to reject packet data having a first priority level in said plurality of priority levels is anticipated by "*discards the incoming user data cell*" disclosed in paragraph 52, lines 7-18.

Regarding claim **74**, wherein said apparatus is a crossbar switch is anticipated by "*cross point switch*" disclosed in paragraph 29, line 5.

Claim Rejections - 35 USC § 103

3. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

4. Claim **72-73** are rejected under 35 U.S.C. 103(a) as being unpatentable over Dooley (US2002/0163914) in further view of Dai et al. (US2004/0100954).

Regarding claim **72**, Dooley (US2002/0163914) teaches all the limitations of claim 72 (see the 102 rejection for claim 59 above) except Dooley (US2002/0163914) does not expressly disclose the apparatus further including set of data rings in communication with said set of input ports and said set of sink ports. Dai et al. (US2004/0100954) discloses data ring used in communication with said set of input ports and said set of sink ports (Refer Fig.1 of Dai et al. (US2004/0100954)). At the time the invention was made, it would have been obvious to a person in ordinary skill in art to connect the input and out port of Dooley (US2002/0163914) by using data ring of Dai et al. (US2004/0100954). One of ordinary skill in art would have been motivated to do so to transmit data (see paragraph 0045, lines 9-14 of Dai et al. (US2004/0100954)).

Regarding claim **72**, Dooley (US2002/0163914) teaches all the limitations of claim 72 (see the 102 rejection for claim 59 above) except Dooley (US2002/0163914) does not expressly disclose the apparatus further including set of data rings couples each sink port in said set of sink ports to each input port and said set of input ports. Dai et al. (US2004/0100954) discloses data ring used in communication for coupling said set of input ports and said set of sink ports (Refer Fig.1 of Dai et al. (US2004/0100954)). At the time the invention was made, it would have been obvious to a person in ordinary skill in art to couple the input and out port of Dooley (US2002/0163914) by using data ring of Dai et al. (US2004/0100954). One of ordinary skill in art would have been motivated to do so for intercoupling switching devices (see paragraph 0045, lines 9-14 of Dai et al. (US2004/0100954)).

Allowable Subject Matter

5. Claims **54-58** are allowed.

Regarding claim **54**, prior art of record Dooley (US2002/0163914) does not expressly disclose the method further including steps to determine whether more than two or three weighted average bandwidth calculated in said step (b) exceed said predetermined value. The prior art of record Dooley (US2002/0163914) also fails to teach determining whether an amount of data exceeds a second or a third threshold.

Regarding claim **55-58**, these claims are all further limiting to claim 54. Hence are allowable over prior art.

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6. Claim **42-50, 53, 61-67** are objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

Regarding claims **42 & 61** prior art of record Dooley (US2002/0163914) does not expressly disclose the method further including steps to determine whether more than one weighted average bandwidth calculated in said step (b) exceed said predetermined value.

Regarding claims **53** prior art of record Dooley (US2002/0163914) does not expressly disclose the method wherein said plurality of time windows has 4 time windows.

Regarding claim **43-50, 62-67** these claims are all further limiting to claim 42 and 61 respectively. Hence are allowable over prior art.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Puneet Bhandari whose telephone number is 571-272-2057. The examiner can normally be reached on 9.00 AM To 5.30 PM.

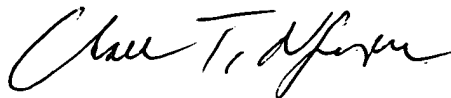
If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Seema Rao can be reached on 571-272-3174. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

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Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

Puneet Bhandari
Examiner
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